

AMENDMENTS TO THE CLAIMS

Replace the claims with the following rewritten listing:

1. – 34. (Cancelled)

35. (New) A monitoring device for a space that is to be monitored for entry of at least one body via an access area comprising:

at least one emitting element which introduces luminous radiation into the access area; and

at least one receiving element which receives the luminous radiation,

wherein at least one light guide is associated with the emitting element, said light guide emitting the luminous radiation into the access area as a diffuse planar light field transversely to a longitudinal direction of the at least one light guide; and

wherein at a receiving end at least one light guide is provided as detecting element for detecting the diffuse light field transversely to the longitudinal direction of the at least one light guide and as transmitting means for transmitting the light out of the light field to the receiving element.

36. (New) A monitoring device in accordance with Claim 35, wherein the emitting light guide associated with the emitting element comprises a structure for radiating the light field.

37. (New) A monitoring device in accordance with Claim 36, wherein the structure is provided to be argumented with increasing distance from the emitting element.

38. (New) A monitoring device in accordance with Claim 35, wherein the emitting light guide associated with the receiving element comprises a structure for receiving the light field.

39. (New) A monitoring device in accordance with Claim 38, wherein the structure is provided to be argumented with increasing distance from the emitting element.

40. (New) A monitoring device in accordance with Claim 35, wherein the means for producing the light field are arranged in such a manner that the luminous radiation is radiated at least partially with a component that is radial and axial in regard to the light guide.

41. (New) A monitoring device in accordance with Claim 35, wherein for each light field there is provided a single emitting element, which irradiates light into the emitting light guide and a single receiver, which receives the light from the receiving light guide.

42. (New) A monitoring device in accordance with Claim 41, wherein the single emitting element is a light emitting LED and the single receiver is a photodiode.

43. (New) A monitoring device in accordance with Claim 35, further comprising an evaluating unit for evaluating shadowing of the light field in a direction of the receiving light guide that occurs upon entry or passage of a body into or through the light field.

44. (New) A monitoring device in accordance with Claim 35, wherein at least two light fields are provided which are evaluated separately by an evaluating unit and are arranged one behind the other in a direction of motion of the body.

45. (New) A monitoring device in accordance with Claim 44, wherein the means for producing the light field, the emitting light guide and the receiving light guide for the two preferably mutually parallel light fields are arranged next to one another.

46. (New) A monitoring device in accordance with Claim 35, wherein at least two light fields are provided which are subdivided into a plurality of partial light fields which are arranged one above the other and are evaluated separately by the evaluating unit.

47. (New) A monitoring device in accordance with Claim 35, wherein at least two light field regions arranged at an angle to one another are provided in the access area.

48. (New) A monitoring device in accordance with Claim 47, wherein each light field region comprises at least two light fields which are arranged one behind the other in a direction of motion of the body.

49. (New) A monitoring device in accordance with Claim 47, wherein each light field region comprises at least two light fields which are arranged one above the other.

50. (New) A monitoring device in accordance with Claim 47, wherein the light field regions cross in the access area.

51. (New) A monitoring device in accordance with Claim 35, further comprising detection means which detect entry or passage of a body as soon as a total luminous power falls below a predefined or predefinable threshold value.

52. (New) A monitoring device in accordance with Claim 51, wherein the threshold value is fixed or dynamically controlled.

53. (New) A monitoring device in accordance with Claim 35, wherein a timing waveform of a shadowing process corresponding to a reduction of a total luminous power reproduces a profile of the body crossing the access area.

54. (New) A monitoring device in accordance with Claim 35, wherein at least two mutually associated light fields are provided and wherein comparison means are provided for temporal correlation of one or both of a falling below a threshold value and a total luminous power of the mutually associated light fields.

55. (New) A monitoring device in accordance with Claim 35, wherein a counter is provided for determining bodies crossing the access area, said counter registering maximum values of a maximum shadowing effect detected by detection means for each body.

56. (New) A method of monitoring an access area to a space which is to be monitored for the entry of at least one body by emitting luminous radiation by means of at least one emitting element which introduces luminous radiation into the access area and at least one receiving element which receives the luminous radiation, the method comprising:

producing at least one planar light field which is emitted diffusely from a light guide transversely to its longitudinal direction into the access area;

detecting the diffuse light field at the receiving end through a light guide also transversely to its longitudinal direction; and

transmitting the diffusely detected light to the receiving element within the light guide.

57. (New) A method in accordance with Claim 56, wherein the luminous radiation for the light field is at least partially radiated with a component that is radial and axial in regard to the light guide.

58. (New) A method in accordance with Claim 56, wherein for each light field the luminous radiation is irradiated into an emitting light guide by a single emitting element and is received from a receiving light guide by a single receiver.

59. (New) A method in accordance with Claim 56, wherein for the purposes of determining the entry or passage of a body into or through the light field, shadowing of the light field in a direction of the receiving light guide is evaluated and an entry or a passage of a body is detected as soon as a total luminous power falls below a predefined or predefinable threshold value.

60. (New) A method in accordance with Claim 59, wherein the threshold value is fixed or dynamically controlled.

61. (New) A method in accordance with Claim 56, wherein at least two mutually associated light fields that are separately evaluated by an evaluating unit are arranged

one behind the other in a direction of motion of the body and are temporally correlated in respect of one or both of a falling below a threshold value or a total luminous power .

62. (New) A method in accordance with Claim 56, wherein at least two mutually associated light fields that are separately evaluated by an evaluating unit are arranged one above the other, and are temporally correlated in respect of one or both of a falling below a threshold value or a total luminous power.

63. (New) A method in accordance with Claim 56, wherein at least two light field regions are irradiated into the access area at an angle to one another.

64. (New) A method in accordance with Claim 63, wherein the light field regions cross in the access area.

65. (New) A method in accordance with Claim 56, wherein a timing waveform of a shadowing process corresponding to a reduction of a total luminous power corresponds to a profile of the body crossing the access area.

66. (New) A method in accordance with Claims 56, wherein a number of maximum shadowing effects is registered for determining a number of bodies.

67. (New) A method in accordance with Claim 66, wherein, if at least one light field region detects a plurality of shadow effects, a plurality of bodies are detected.